

What is claimed is:

- 1 1. A method comprising:
2 providing a low voltage signal to a liquid crystal
3 cell; and
4 driving the liquid crystal cell with the low voltage
5 signal.
- 1 2. The method of claim 1, wherein providing the low
2 voltage signal comprises providing a pulse width modulated
3 signal.
- 1 3. The method of claim 2, wherein the pulse width
2 modulated signal comprises variable width square wave
3 pulses.
- 1 4. The method of claim 2, further comprising
2 providing the pulse width modulated signal at equal to or
3 less than approximately 3.3 volts.
- 1 5. The method of claim 1, further comprising
2 providing a frame update to the liquid crystal cell.
- 1 6. The method of claim 1, wherein driving the liquid
2 crystal cell comprises causing an optically digital
3 response in the liquid crystal cell to a digital signal.

1 7. The method of claim 1, further comprising driving
2 the liquid crystal cell at a frequency greater than 120
3 Hertz.

1 8. The method of claim 7, further driving the liquid
2 crystal cell with a color sequence having at least two
3 colors.

1 9. The method of claim 1, further comprising
2 retarding an output of the liquid crystal cell by less than
3 a quarter wave.

1 10. An apparatus comprising:
2 a liquid crystal cell having a liquid crystal
3 material; and
4 drive circuitry coupled to the liquid crystal cell,
5 the drive circuitry to provide a low voltage signal to
6 drive the liquid crystal cell.

1 11. The apparatus of claim 10, further comprising a
2 partial polarization rotation retarder coupled to the
3 liquid crystal cell.

1 12. The apparatus of claim 11, wherein the partial
2 polarization rotation retarder comprises a partial wave
3 retardation film.

1 13. The apparatus of claim 11, further comprising a
2 control device to control a gap between the partial
3 polarization rotation retarder and the liquid crystal cell.

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2 14. The apparatus of claim 10, wherein the liquid
3 crystal cell has a cell gap of less than approximately 1
4 micron.

1 15. The apparatus of claim 10, wherein the drive
2 circuitry comprises pixel level digital drivers.

1 16. The apparatus of claim 15, wherein the liquid
2 crystal cell is adapted to exhibit an optically digital
3 response to the pixel level digital drivers.

1 17. The apparatus of claim 10, wherein the drive
2 circuitry is coupled to provide a low voltage pulse width
3 modulated signal.

1 18. The apparatus of claim 10, wherein the liquid
2 crystal cell comprises a microdisplay.

1 19. The apparatus of claim 18, wherein the
2 microdisplay comprises a liquid crystal on silicon device.

1 20. A system comprising:
2 a polarization beam splitter;
3 a liquid crystal cell having a liquid crystal material
4 and positioned to receive incident light from the
5 polarization beam splitter; and
6 drive circuitry coupled to the liquid crystal cell,
7 the drive circuitry to provide a low voltage signal to
8 drive the liquid crystal cell.

1 21. The system of claim 20, further comprising a
2 partial polarization rotation retarder coupled to the
3 liquid crystal cell.

1 22. The system of claim 20, wherein the liquid
2 crystal cell has a cell gap less than approximately 1
3 micron.

1 23. The system of claim 20, wherein the liquid
2 crystal cell comprises a liquid crystal on silicon display.

1 24. The system of claim 20, further comprising a
2 color switcher to switch the incident light into light of
3 at least two colors.

1 25. The system of claim 24, further comprising at
2 least two liquid crystal cells to receive the light of at
3 least two colors.

1 26. The system of claim 20, wherein the drive
2 circuitry comprises a processor and at least two buffers to
3 provide frame updates to the liquid crystal cell.

1 27. An article comprising a machine-readable storage
2 medium containing instructions that if executed enable a
3 system to:

4 form a low voltage signal;
5 provide the low voltage signal to a liquid crystal
6 cell; and
7 drive the liquid crystal cell with the low voltage
8 signal.

1 28. The article of claim 27, further comprising
2 instructions that if executed enable the system to drive
3 the liquid crystal cell with a low voltage pulse width
4 modulated signal.

1 29. The article of claim 27, further comprising
2 instructions that if executed enable the system to provide
3 a first frame update to the liquid crystal cell.

1 30. The article of claim 29, further comprising
2 instructions that if executed enable the system to store a
3 second frame update in a buffer while the first frame
4 update is provided to the liquid crystal cell.